

< TEST

Biology Chemistry Physics English

1) These are specialized cells for movement:

- A) Neurons
- B) Muscles
- C) Nephrons
- D) Collagens

☐ A ☐ B ☐ C ☐ D

2) The muscles that are attached to the skeleton and are associated with the movement of bones:

- A) Striated
- B) Smooth
- C) Cardiac
- D) Skeletal

☐ A ☐ B ☐ C ☐ D

3) _____ muscles were the earliest form of muscle to evolve and it is found throughout animal kingdom:

- A) Smooth
- B) Cardiac
- C) Skeletal
- D) Striped

☐ A ☐ B ☐ C ☐ D

4) All of the following are the key words for smooth muscle, EXCEPT:

- A) Earliest form
- B) Non-striated
- C) Involuntary
- D) Pump blood

☐ A ☐ B ☐ C ☐ D

5) Thin filaments of muscles contain _____ chains of actin molecules:

- A) Four
- B) One
- C) Three
- D) Two

☐ A ☐ B ☐ C ☐ D

6) Each muscle fibre is surrounded by a modified cell membrane called:

- A) Sarcomere
- B) Sarcolemma
- C) Myofilament
- D) Myosin filament

☐ A ☐ B ☐ C ☐ D

7) A sarcomere is the region of a myofibril between two successive:

- A) M-lines
- B) Z-lines
- C) I-bands
- D) T-tubules

☐ A ☐ B ☐ C ☐ D

- 8) The primary function of muscle is to produce:
A) Nerve impulse C) Hormone
B) Movement D) ATP
- ☐ A ☐ B ☐ C ☐ D
- 9) According to sliding filament theory, when muscle fibers are stimulated by nervous system, which of the following changes occur?
A) H-zone becomes more visible
B) I band shortens
C) A-band broadens
D) Z-line moves further apart
- ☐ A ☐ B ☐ C ☐ D
- 10) Pick up the diameter of muscle fibre:
A) 1 – 2 μm C) 100 – 1000 μm
B) 7 – 8 μm D) 10 – 100 μm
- ☐ A ☐ B ☐ C ☐ D
- 11) The currently popular model of muscle fiber contraction is called:
A) Induce fit model C) Sliding filament model
B) Lock and key model D) Fluid mosaic model
- ☐ A ☐ B ☐ C ☐ D
- 12) Intercalated discs are characteristic features of:
A) Smooth muscle C) Skeletal muscle
B) Cardiac muscle D) Visceral muscle
- ☐ A ☐ B ☐ C ☐ D
- 13) Each A band has a lighter stripe in its mid-section called:
A) M line C) Sarcomere
B) Z line D) H zone
- ☐ A ☐ B ☐ C ☐ D
- 14) Its length is determined by thick filament:
A) I-band C) A-band
B) H-zone D) Z-line
- ☐ A ☐ B ☐ C ☐ D
- 15) Z line lies between two consecutive:
A) Thick filaments C) Actin filaments
B) Thin filaments D) Microfilaments
- ☐ A ☐ B ☐ C ☐ D
- 16) The vertebrate possess _____ kinds of muscle cells:
A) Two C) Four
B) Three D) Five
- ☐ A ☐ B ☐ C ☐ D
- 17) A mechanoenzyme protein that, in the form of thick filaments, interacts with actin to bring about the contraction of muscle cells called:
A) Troponin C) Myosin
B) Actin D) Myoglobin
- ☐ A ☐ B ☐ C ☐ D

18) Overlapping of thick and thin filaments occurs in:

- A) I-band C) M-band
B) A-band D) Z-band

☐ A ☐ B ☐ C ☐ D

19) These muscles are primarily involved in locomotory actions and changes of body postures:

- A) Smooth C) Skeletal
B) Cardiac D) Unstriated

☐ A ☐ B ☐ C ☐ D

20) When muscle is required to contract calcium ions bind with?

- A) Actin C) Troponin
B) Myosin D) Tropomyosin

☐ A ☐ B ☐ C ☐ D

21) The smallest contractile unit of muscle fibre is:

- A) Myofibril C) Myofilament
B) Sarcolemma D) Sarcomere

☐ A ☐ B ☐ C ☐ D

22) The thin filaments in a myofibril are composed chiefly of:

- A) Myosin molecule
B) Actin molecule
C) Troponin molecule
D) Tropomyosin molecule

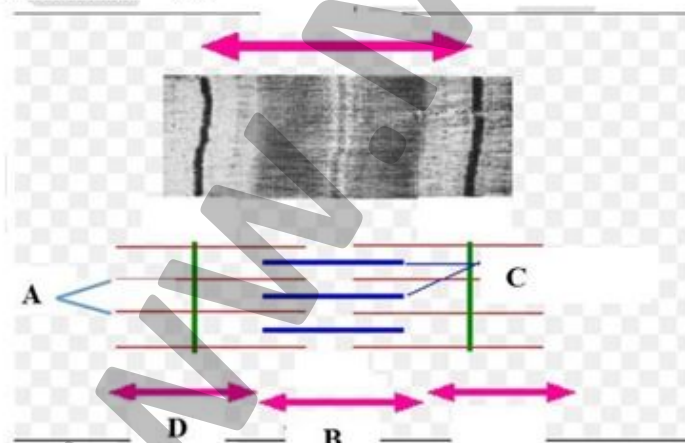
☐ A ☐ B ☐ C ☐ D

23) Each muscle bundle consists of:

- A) Muscle fibers C) Myofibrils
B) Muscles D) Myofilaments

☐ A ☐ B ☐ C ☐ D

24) The figure shows ultrastructure of skeletal muscle fiber. Choose the correct option regarding its part labelled as A – D:



- A) I-band C) Thin filaments
B) A-band D) Z-line

☐ A ☐ B ☐ C ☐ D

25) Which ions are required for muscle contraction?

- A) Potassium C) Calcium
B) Magnesium D) Sodium

☐ A ☐ B ☐ C ☐ D

26) Who hypothesized that organism evolved through the inheritance of acquired characteristics?

- A) Darwin
B) Lamarck
C) Aristotle
D) Linnaeus

☐ A ☐ B ☐ C ☐ D

27) Forelimb of human, cats, whales, bats and all other mammals are examples of:

- A) Homologous organs
B) Analogous organs
C) Convergent evolution
D) Appendages with similar functions

☐ A ☐ B ☐ C ☐ D

28) Lamarck was a Mendel's:

- A) Successor
B) Subordinate
C) Predecessor
D) Contemporary

☐ A ☐ B ☐ C ☐ D

29) Most fossils are found in:

- A) Igneous rocks
B) Metamorphic rocks
C) Sedimentary rocks
D) Bare rocks

☐ A ☐ B ☐ C ☐ D

30) The belief that the origin of life and diversity of life from the act of God is called:

- A) Mutation
B) Evolution
C) Special creation
D) Uniformitarianism

☐ A ☐ B ☐ C ☐ D

31) Scientist who was first argued evolution with evidence?

- A) Aristotle
B) Darwin
C) Mendel
D) Lamarck

☐ A ☐ B ☐ C ☐ D

32) _____ also called the modern evolutionary synthesis:

- A) Lamarckism
B) Darwinism
C) Neo-Darwinism
D) Evolution

☐ A ☐ B ☐ C ☐ D

33) Which of the following theories of evolution can best explain vestigial organs?

- A) Lamarckism
B) Darwinism
C) Natural selection
D) Special creation

☐ A ☐ B ☐ C ☐ D

34) Who believed in perceived unity in life?

- A) Lamarck
B) Darwin
C) Mendel
D) Aristotle

☐ A ☐ B ☐ C ☐ D

35) From evolutionary point of view, which respiratory protein is common many organisms?

- A) Cytochrome a
B) Cytochrome b
C) Cytochrome c
D) Cytochrome d

☐ A ☐ B ☐ C ☐ D

- 36) Homologous organs show:**
A) Parallel evolution C) Convergent evolution
B) Divergent evolution D) Adaptive evolution
- ☐ A ☐ B ☐ C ☐ D
- 37) It is considered as a strong evidence of evolution:**
A) Fossil record C) Biogeography
B) Comparative embryology D) Comparative anatomy
- ☐ A ☐ B ☐ C ☐ D
- 38) Processes that have transformed life on earth from earliest to diverse forms are collectively called:**
A) Mutation C) Biodiversity
B) Evolution D) Phyletic lineage
- ☐ A ☐ B ☐ C ☐ D
- 39) At Galapago Islands, Darwin studied _____ types of _____:**
A) 13, finches C) 20, pigeon
B) 13, tortoise D) 10, rabbits
- ☐ A ☐ B ☐ C ☐ D
- 40) The theory of inheritance of acquired characters was given by:**
A) Darwin C) Wallace
B) Lamarck D) Weismann
- ☐ A ☐ B ☐ C ☐ D
- 41) The diversity in the type of beaks of finches adapted to different feeding habit on the Galapagos Island, as observed by Darwin, provides evidence for:**
A) Intraspecific competition
B) Interspecific competition
C) Origin of species by natural selection
D) Intraspecific variations
- ☐ A ☐ B ☐ C ☐ D
- 42) Which of the following structures is homologous to the wing of a bird?**
A) Hindlimb of rabbit C) Dorsal fin of shark
B) Flipper of whale D) Wing of moth
- ☐ A ☐ B ☐ C ☐ D
- 43) The finches of Galapagos islands provide an evidence in favour of:**
A) Evolution due to mutation
B) Retrogressive evolution
C) Biogeographical evolution
D) Special creation
- ☐ A ☐ B ☐ C ☐ D
- 44) Which of the following are homologous organs?**
A) Wings of bird and locust
B) Wings of bird and pectoral fins of fish
C) Wings of bat and butterfly
D) Legs of frog and cockroach
- ☐ A ☐ B ☐ C ☐ D
- 45) Convergent evolution leads to:**
A) Rudimentary organs C) Homologous organs
B) Vestigial organs D) Analogous organs

B) Analogous organs

D) Vestigial organs

- ☐ A ☐ B ☐ C ☐ D

46) The homologous organs are those that show similarity in:

A) Appearance

C) Function

B) Origin

D) Size

- ☐ A ☐ B ☐ C ☐ D

47) Study of fossils is:

A) Ichthyology

C) Organic evolution

B) Palaeontology

D) Herpetology

- ☐ A ☐ B ☐ C ☐ D

48) 'Origin of Species' was written by:

A) Oparin

C) Weismann

B) Lamarck

D) Darwin

- ☐ A ☐ B ☐ C ☐ D

49) Who figured out the mechanics of evolution known as natural selection?

A) Lamarck

C) Charles Darwin

B) Alfred Wallace

D) Cuvier

- ☐ A ☐ B ☐ C ☐ D

50) Each myosin filament is surrounded by _____ actin filaments on each end:

A) Two

C) Eight

B) Six

D) Ten

- ☐ A ☐ B ☐ C ☐ D

PREVIOUS

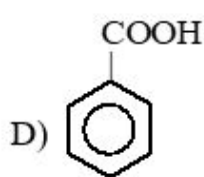
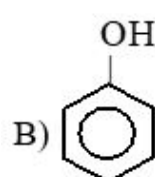
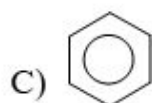
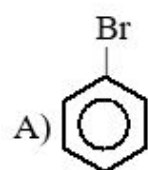
FINISH TEST

NEXT

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Biology **Chemistry** Physics English

- 51) A substance which activates the aromatic ring to further substitution is called an activating group. Which of the following is strongly activating group attached with benzene ring?



☐ A ☐ B ☐ C ☐ D

- 52) Which of the following compounds is used as drying agent in order to get absolute alcohol from rectified spirit?

A) CaO

C) H_3PO_4

B) Conc. H_2SO_4

D) Al_2O_3

☐ A ☐ B ☐ C ☐ D

- 53) Which compound shows hydrogen bonding?

A) C_2H_6

C) $\text{C}_2\text{H}_5\text{Cl}$

B) $\text{CH}_3\text{-O-CH}_3$

D) $\text{C}_2\text{H}_5\text{OH}$

☐ A ☐ B ☐ C ☐ D

- 54) Ethanol can be converted into ethanoic acid by:

A) Hydrogenation

C) Hydration

B) Oxidation

D) Fermentation

☐ A ☐ B ☐ C ☐ D

- 55) Which of the following compounds have no attraction at all with water?

A) C_6H_6

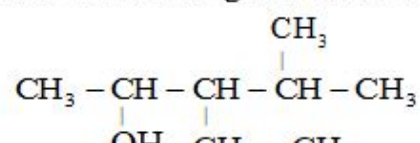
C) $\text{C}_2\text{H}_5\text{OH}$

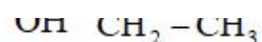
B) $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$

D) $\text{CH}_3\text{-O-CH}_3$

☐ A ☐ B ☐ C ☐ D

- 56) Consider the following structure of alcohol:



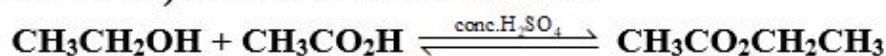


The correct name according to IUPAC of the above given structure of alcohol is:

- A) 3-Ethyl-4-methylpentan-2-ol
- B) 3-Ethyl-2-methylpentan-4-ol
- C) 3-Methyl-4-ethylpentan-2-ol
- D) 2-Ethyl-3-methylpentan-4-ol

☐ A ☐ B ☐ C ☐ D

- 57) When ethanol is warmed with ethanoic acid in the presence of strong acid catalyst, an ester (ethyl ethanoate) is formed. In this reaction:



- A) Alcohol is reduced
- B) O-H bond in ethanoic acid is broken
- C) O-H bond in ethanol is broken
- D) Acid is oxidized

☐ A ☐ B ☐ C ☐ D

- 58) Which of the following statements does not match correctly?

- A) Compounds in which -OH group is directly attached to the benzene ring are known as phenols
- B) When -OH group is attached to the side chain the compound is known as aromatic alcohol
- C) In alcohols -OH group is attached to singly bonded sp^3 hybridized carbon atom
- D) Benzene is more reactive than toluene for nitration

☐ A ☐ B ☐ C ☐ D

- 59) Primary alcohols normally give us aldehydes when oxidized in the presence of $\text{Na}_2\text{Cr}_2\text{O}_7$, what the product will be, when the secondary alcohols are oxidized in same conditions?

- A) Alkenes
- B) Alkynes
- C) Alkyl halides
- D) Ketones

☐ A ☐ B ☐ C ☐ D

- 60) Which of the following tests helps us to distinguish between 1° , 2° , 3° alcohols?

- A) Lucas test only
- B) Dichromate test only
- C) Both A and B
- D) Neither A nor B

☐ A ☐ B ☐ C ☐ D

- 61) Which of the following statements about alcohol is/are correct?

- A) It can act as an acid only
- B) It can act as a base only
- C) Both A and B
- D) Neither A nor B

☐ A ☐ B ☐ C ☐ D

- 62) Which enzyme is not involved in the fermentation of starch?

- A) Diastase
- B) Zymase
- C) Urease
- D) Invertase

☐ A ☐ B ☐ C ☐ D

63) Alcohol obtained by fermentation is only upto:

- A) 10% C) 9%
B) 11% D) 12%

☐ A ☐ B ☐ C ☐ D

64) When excess ethanol is heated at 140°C in the presence of conc. H_2SO_4 acid, the product obtained is:

- A) Ethene C) Ethanal
B) Ethoxyethane D) Ethane

☐ A ☐ B ☐ C ☐ D

65) Which of the following reactions is not shown by phenol?

- A) Reaction with NaOH C) Reaction with HX
B) Reaction with FeCl_3 D) Catalytic reduction

☐ A ☐ B ☐ C ☐ D

66) Primary alcohols can be oxidized to aldehydes using either acidified potassium dichromate (VI) or acidified potassium manganate (VII). Both these oxidizing agents change colour as they are reduced. What is the colour of each oxidizing agent before and after it has reacted?

Opt.	Acidified Potassium Dichromate (VI)		Acidified Potassium Manganate (VII)	
A)	Green	Orange	Purple	Colourless
B)	Orange	Green	Colourless	Purple
C)	Orange	Green	Purple	Colourless
D)	Purple	Colourless	Orange	Green

☐ A ☐ B ☐ C ☐ D

67) Which one of the following type of reactions is shown by alcohols?

- A) Reaction in which C-O bond breaks only
B) Reaction in which O-H bond breaks only
C) Both A and B
D) Neither A nor B

☐ A ☐ B ☐ C ☐ D

68) When ethanol is oxidized by acidified $\text{K}_2\text{Cr}_2\text{O}_7$, the colour of solution turns green due to?

- A) Lose of oxygen from ethanol
B) Reduction of dichromate (VI) into Cr^{+3}
C) Oxidation of Cr^{+3} into dichromate (VI)
D) Oxidation of dichromate (VI) into Cr^{+3}

☐ A ☐ B ☐ C ☐ D

69) Consider the following statements for the classification of alcohols:

- I. A primary alcohol has the – OH group at the end of carbon chain
II. A secondary alcohol has the – OH group in the body of carbon chain
III. A tertiary alcohol has the – OH group at the branch in the carbon chain
IV. A neo-alcohol has the – OH group at the 2nd last carbon of the chain

Which of the above statement is incorrect?

- A) I only C) IV only
B) II and III D) I, II, III and IV

☐ A ☐ B ☐ C ☐ D

70) How will you distinguish between methanol and ethanol?

- A) By Lucas test C) By oxidation
B) By silver mirror test D) By Iodoform test

☐ A ☐ B ☐ C ☐ D

71) Phenol reacts with alkalies to form salts and this is called:

- A) Electrophilic substitution reaction
B) Acid base reaction
C) Elimination reaction
D) Oxidation reduction reaction

☐ A ☐ B ☐ C ☐ D

72) Which one of the following is the more reactive alcohols when bond is to be broken between oxygen and hydrogen:

- A) $\text{CH}_3\text{-OH}$ C) R_2CHOH
B) $\text{R-CH}_2\text{-OH}$ D) R_3COH

☐ A ☐ B ☐ C ☐ D

73) According to Lewis concept ethers behave as:

- A) Lewis Acid
B) Lewis Base
C) Lewis Acid as well as Lewis base
D) Neither A nor B

☐ A ☐ B ☐ C ☐ D

74) Which of the following statements is incorrect about physical properties of phenol?

- A) It forms stronger hydrogen bonding
B) It is also known as carbolic acid
C) It has higher boiling point than ethanol
D) It is not caustic in nature

☐ A ☐ B ☐ C ☐ D

75) A type of alcohols in which -OH functional group is attached with such carbon atom which is further attached to two carbon atoms is called:

- A) Primary alcohol C) Tertiary alcohol
B) Secondary alcohol D) Neo alcohol

☐ A ☐ B ☐ C ☐ D

76) Consider the following uses of methanol and ethanol:

- I. Methanol is used as a solvent for fats oils, paints, varnishes.
II. It is used as anti-freezing agent in the radiators of automobiles and also used for denaturing of alcohol.
III. Ethanol is used as a solvent, as a drink and as a fuel in some countries.

Which of the above statements is/are correct?

- A) I only C) II and III only
B) II only D) I, II and III

☐ A ☐ B ☐ C ☐ D

77) Ethanol can be denatured by adding all of the following substance EXCEPT:

- A) 10% methanol
B) A small quantity of pyridine
C) A small quantity of acetone

D) A small quantity of thiophene

☐ A ☐ B ☐ C ☐ D

78) Carboic acid is treated with dilute nitric acid at 25°C, the product is:

- A) o-nitrophenol C) m-nitrophenol
B) p-nitrophenol D) Both A and B

☐ A ☐ B ☐ C ☐ D

79) Which one of the following can be oxidised to the corresponding carbonyl compound?

- A) Phenol
B) 2-Methyl-2-hydroxypropane
C) 2-Hydroxypropane
D) Ortho-nitrophenol

☐ A ☐ B ☐ C ☐ D

80) Which of the following will not form a yellow precipitate on heating with an alkaline solution of iodine?

- A) CH₃OH
B) CH₃CH₂OH
C) CH₃CH(OH)CH₃
D) CH₃CH₂CH(OH)CH₃

☐ A ☐ B ☐ C ☐ D

81) Which of the following statements about structure of ether is incorrect?

- A) Methoxymethane (CH₃OCH₃)
B) Methoxyethane (CH₃OCH₂CH₃)
C) Ethoxyethane (C₂H₅OCH₂CH₃)
D) Methoxypropane (CH₃OCH₂CH₂CH₂CH₃)

☐ A ☐ B ☐ C ☐ D

82) Which of the following is a secondary alcohol?

- A) 2-Methylpropan-1-ol C) Butane-1-ol
B) 2-Methylpropan-2-ol D) Butan-2-ol

☐ A ☐ B ☐ C ☐ D

83) Which of the following alcohols is least reactive when C – O bond breaks?

- A) CH₃ – OH C) Secondary alcohol
B) Primary alcohol D) Tertiary alcohol

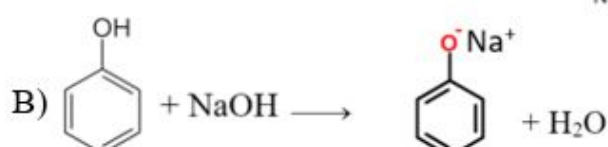
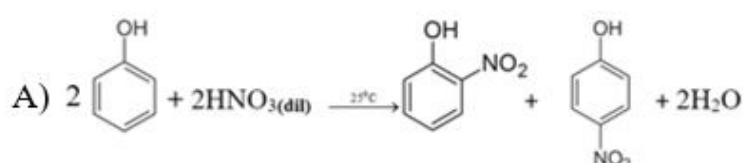
☐ A ☐ B ☐ C ☐ D

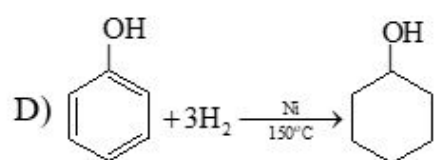
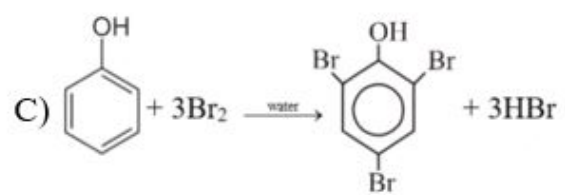
84) All of the following are different names of methanol EXCEPT:

- A) Methyl alcohol C) Carbinol
B) Wood spirit D) Grain alcohol

☐ A ☐ B ☐ C ☐ D

85) In which of the following reactions of phenol, white ppt. are formed?





☐ A ☐ B ☒ C ☐ D

PREVIOUS

FINISH TEST

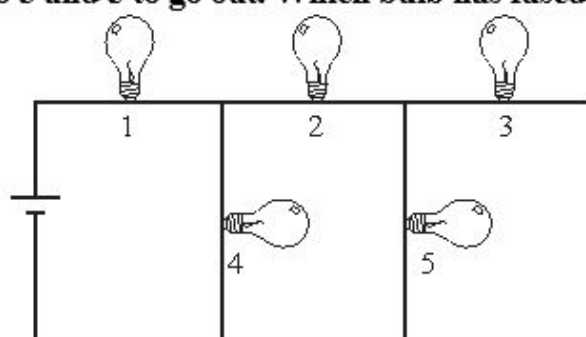
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< TEST

Biology Chemistry **Physics** English

- 86) In the figure below, a fuse in one of the bulbs causes just bulb 3 and 5 to go out. Which bulb has fused?



- A) 1 C) 3
B) 2 D) 4

☐ A ☐ B ☐ C ☐ D

- 87) A 200 W bulb B_1 , a 150 W bulb B_2 and a 75 W bulb B_3 are connected in series across a 240 V source. Now P_1 , P_2 and P_3 are the output powers of bulbs B_1 , B_2 and B_3 respectively, then:

- A) $P_1 > P_2 = P_3$ C) $P_1 < P_2 = P_3$
B) $P_1 > P_2 > P_3$ D) $P_1 < P_2 < P_3$

☐ A ☐ B ☐ C ☐ D

- 88) "If a resistor is traversed in the direction of current, the change in potential is negative & vice versa", is a statement of:

- A) Kirchhoff's current law
B) Kirchhoff's voltage law
C) Kirchhoff's mesh rule
D) Rule for finding potential change

☐ A ☐ B ☐ C ☐ D

- 89) In a potentiometer experiment a cell of e.m.f. 1.25 V gives a balance point 35 cm length of wire. If the cell is replaced by another cell, the balance point is shifted to 63 cm. What is e.m.f. of second cell?

- A) 4.25 V C) 2.25 V
B) 1.25 V D) 3.25 V

☐ A ☐ B ☐ C ☐ D

- 90) In potentiometer, the ratio of e.m.f.s of two cell $\frac{E_1}{E_2}$ is

equal to:

- A) $\ell_1 + \ell_2$ C) ℓ_2 / ℓ_1
B) $\ell_1 - \ell_2$ D) ℓ_1 / ℓ_2

☐ A ☐ B ☐ C ☐ D

- 91) In the short circuit, current is _____ and in the open circuit, resistance is _____:
- A) Zero, infinite C) Zero, zero
B) Infinite, infinite D) Infinite, zero

☐ A ☐ B ☐ C ☐ D

- 92) The internal resistance of a cell can be expressed:
- A) $\frac{E - V}{R}$ C) $\frac{E}{I} - IR$
B) $\frac{E - V}{I}$ D) None of these

☐ A ☐ B ☐ C ☐ D

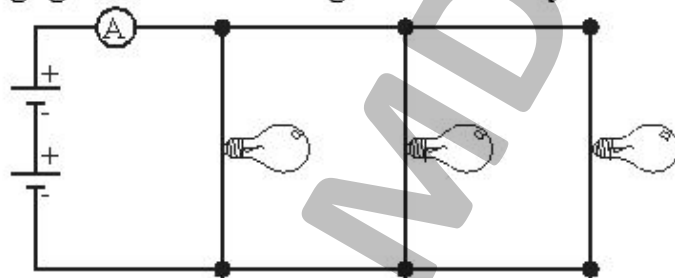
- 93) A battery of 6 V is connected to the terminals of a 3 m long wire of uniform thickness and resistance 100 Ω . The difference of potential between two points separated by 50 cm is:
- A) 3.0 V C) 1.0 V
B) 2.0 V D) 0.5 V

☐ A ☐ B ☐ C ☐ D

- 94) Five cells, each of emf E and internal resistance "r", are connected in series. If by mistake one of the cells is connected wrongly, the equivalent emf and internal resistance of the combination are?
- A) 5E, 5r C) 3E, 3r
B) 5E, 3r D) 3E, 5r

☐ A ☐ B ☐ C ☐ D

- 95) Three similar light bulbs are connected to a constant voltage DC supply as shown in the diagram. Each bulb operates at normal brightness and an ammeter of negligible resistance registers a steady current.

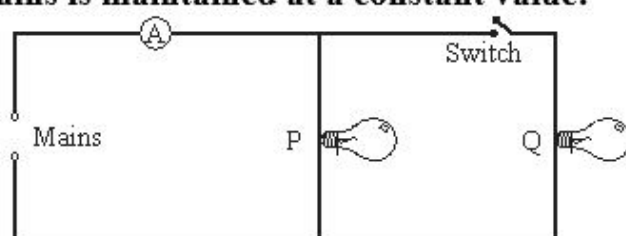


The filament of one of the bulbs breaks. What happens to the ammeter reading and the brightness of the remaining bulbs?

- A) Ammeter reading increases, bulb brightness increases
B) Ammeter reading increases, bulb brightness remains unchanged
C) Ammeter reading remains unchanged, bulb brightness remains unchanged
D) Ammeter reading decreases, bulb brightness remains unchanged

☐ A ☐ B ☐ C ☐ D

- 96) How will the reading in the ammeter A of the figure beneath be affected if another identical bulb Q is connected in parallel to P as shown. The voltage in the mains is maintained at a constant value:



- A) The reading will be reduced to one-half
- B) The reading will not be affected
- C) The reading will be double of previous one
- D) The reading will be increased four fold

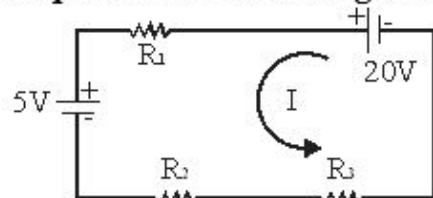
☐ A ☐ B ☐ C ☐ D

- 97) Two electric bulbs rated as (P_1, V) and (P_2, V) are connected in series across V (volts) source. Then the total power dissipation by combination is:

- A) $P_1 + P_2$
- B) $\sqrt{P_1 P_2}$
- C) $\frac{P_1 P_2}{P_1 + P_2}$
- D) $\frac{(P_1 + P_2)}{P_1 P_2}$

☐ A ☐ B ☐ C ☐ D

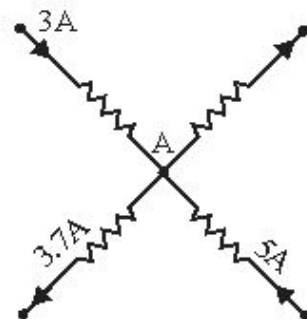
- 98) The KVL equation for following circuit is:



- A) $20 - IR_1 - 5 - IR_2 - IR_3 = 0$
- B) $-20 + IR_1 + 5 - IR_2 + IR_3 = 0$
- C) $20 - IR_1 + 5 - IR_2 + IR_3 = 0$
- D) None of these

☐ A ☐ B ☐ C ☐ D

- 99) In the diagram shown the current flowing from the upper right resistance is:



- A) 4.3 A
- B) 4.7 A
- C) 8.0 A
- D) 7.3 A

☐ A ☐ B ☐ C ☐ D

- 100) An electric bulb is rated 220 V, 200 W. The power dissipated by it when operated at 110 V is:

- A) 50 W
- B) 75 W
- C) 25 W
- D) 90 W

☐ A ☐ B ☐ C ☐ D

- 101) Pick out the wrong statement:

- A) In a simple battery circuit, the point of lowest potential is the negative terminal of the battery
- B) The resistance of an incandescent lamp is greater when the lamp is switched off
- C) An ordinary 100 W lamp has less resistance than a 60 W lamp
- D) The heat developed in a uniform wire increases directly as the resistance of the wire used is increased

☐ A ☐ B ☐ C ☐ D

- 102) Which statement describes the electrical potential difference between two points in a wire carrying a current?

- A) The force required to move a unit positive charge between the points

- B) The ratio of the energy dissipated between the points to the current
 C) The ratio of the power dissipated between the points to the current
 D) The ratio of the power dissipated between the points to the charge moved

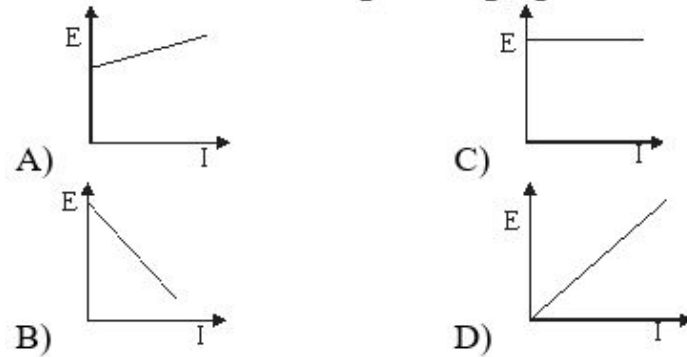
☐ A ☐ B ☐ C ☐ D

- 103)** A battery has an emf of 24 V and an internal resistance of 2.5Ω . When an external 5.5Ω resistor is connected across the terminals of the battery, the potential difference between the terminals will be:

A) 22.5 V C) 13.5 V
 B) 18.5 V D) 16.5 V

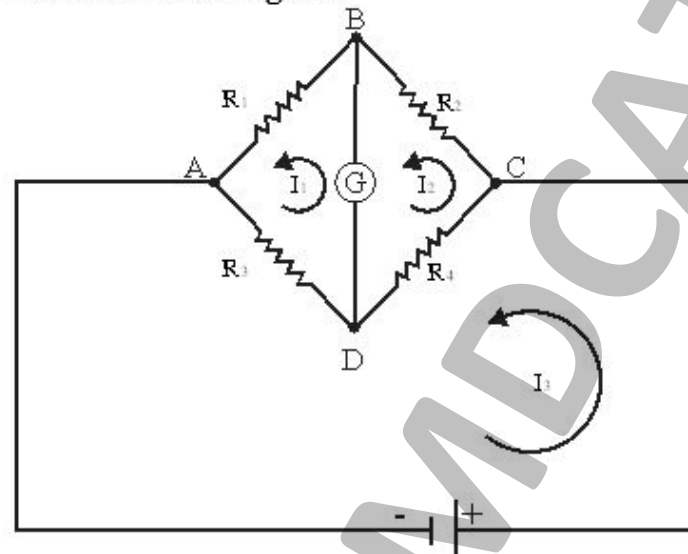
☐ A ☐ B ☐ C ☐ D

- 104)** The emf "E" of a cell varies with the current drawn from the cell according to the graph:



☐ A ☐ B ☐ C ☐ D

- 105)** The KVL – equation for loop ABDA in the following Wheatstone Bridge is:



- A) $-I_1 R_1 - (I_1 - I_2) R_g - I_1 R_3 = 0$
 B) $-I_1 R_1 - (I_2 - I_1) R_g - I_3 R_3 = 0$
 C) $-I_1 R_1 - (I_1 - I_2) R_g - (I_1 - I_3) R_3 = 0$
 D) None of these

☐ A ☐ B ☐ C ☐ D

- 106)** Conventionally speaking the current flowing towards a point is taken as _____ and the voltage of a battery in which current is traversed from high to low potential is taken as _____.

A) Positive, positive C) Negative, Positive
 B) Positive, negative D) Negative, Negative

☐ A ☐ B ☐ C ☐ D

- 107)** The resistance of hot tungsten filament is about 10 times more than the resistance of cold tungsten filament. What will be the resistance of 100 W and 200 V lamp when not in use?

A) 40Ω C) 400Ω
 B) 20Ω D) 200Ω

☐ A ☐ B ☐ C ☐ D

- 108) A cell of internal resistance $2\ \Omega$ and emf 10 V is connected to a uniform wire of length 500 cm and resistance $3\ \Omega$. The potential gradient in wire is:

A) 24 mV/cm C) 12 mV/cm
B) 30 mV/cm D) 4 mV/cm

☐ A ☐ B ☐ C ☐ D

- 109) The unit of electromotive force is:

A) Newton C) Watt
B) Joule D) Volt

☐ A ☐ B ☐ C ☐ D

- 110) The source of e.m.f. transfers its maximum power to the external circuit when (r = internal resistance, R = load resistance):

A) $r = 0$ C) $r < R$
B) $R = r$ D) $r > R$

☐ A ☐ B ☐ C ☐ D

- 111) When the direction of current is from negative to positive terminal of the battery then 'E' is taken as:

A) Zero C) Positive
B) Normal D) Negative

☐ A ☐ B ☐ C ☐ D

- 112) Kirchhoff's 1st law is based upon law of conservation of:

A) Current C) Voltage
B) Charge D) Energy

☐ A ☐ B ☐ C ☐ D

- 113) The value of maximum output power is given as:

A) $P = \frac{E^2}{R}$ C) $P = \frac{4E^2}{R}$
B) $P = \frac{E^2}{4r}$ D) $P = \frac{E^2}{4R^2}$

☐ A ☐ B ☐ C ☐ D

- 114) A cell of internal resistance $2.0\ \Omega$ and electromotive force (e.m.f.) 1.5 V is connected to a resistor of resistance $3.0\ \Omega$. What is the potential difference across internal resistor?

A) 5 C) 0.9
B) 1.2 D) 0.6

☐ A ☐ B ☐ C ☐ D

- 115) A total charge of 100 C flows through a 12 watt bulb in a time of 50 second . What is the potential difference across the bulb during this time?

A) 0.12 V C) 6.0 V
B) 2.0 V D) 24 V

☐ A ☐ B ☐ C ☐ D

< TEST

Biology Chemistry Physics **English**

116) Directions: Fill in the blank with appropriate option.

To be _____ the dwindling number of people who understood such things was to him a kind of secret and valued freemasonry

- A) Between C) In
B) Among D) From

☐ A ☐ B ☐ C ☐ D

117) These were blessed breaks in routine, but not, of course, comparable to the holidays we got _____ Christmas.

- A) On C) At
B) By D) To

☐ A ☐ B ☐ C ☐ D

118) A row of neat hurdles was arranged on the polished floor; like the ones _____ which Gorgios had won his race when at school.

- A) On C) At
B) Upon D) Over

☐ A ☐ B ☐ C ☐ D

119) Few people were about, and here and there rang out the steps of solitary travelers _____ home across the bridge to Battersea.

- A) In the way C) On the way
B) By the way D) At the way

☐ A ☐ B ☐ C ☐ D

120) I explained the danger but said that I would not insist _____ a throat examination so long as they would take the responsibility.

- A) In C) On
B) At D) For

☐ A ☐ B ☐ C ☐ D

121) Asim came in last; his total time raced was just _____ fifteen minutes.

- A) With C) On
B) In D) Over

☐ A ☐ B ☐ C ☐ D

- 122) It was a frequent picture in his mind, that summer day with the sunlight filtering _____ the dust in Wetherby's study.
A) From C) Through
B) In D) Across
☐ A ☐ B ☐ C ☐ D
- 123) National machines and equipment may replace foreign machines because they are superior _____ foreign equipment.
A) To C) Of
B) From D) Than
☐ A ☐ B ☐ C ☐ D
- 124) She blurted out and immediately took out the key which hung in a thread _____ her neck.
A) On C) Across
B) Around D) Through
☐ A ☐ B ☐ C ☐ D
- 125) For eight years, he sought to find a means to aid the leucocytes in their fight _____ invading bacteria.
A) To C) For
B) With D) Against
☐ A ☐ B ☐ C ☐ D
- 126) Directions: Pick the correct option.
A) Chips saw them off at the railway station at the evening.
B) Chips saw them to on the railway station in the evening.
C) Chips saw them of at the railway station in the evening.
D) Chips saw them off at the railway station in the evening.
☐ A ☐ B ☐ C ☐ D
- 127) A) I remember going in the British Museum one day to read for the cure for some slight ailment.
B) I remember going to the British Museum one day to read up the cure for some slight ailment.
C) I remember going towards the British Museum one day read up the cure of some slight ailment.
D) I remember going toward the British Museum one day to read into the cure for some slight ailment.
☐ A ☐ B ☐ C ☐ D
- 128) A) The package was lying on the front door
B) The package was lying of the front door
C) The package was lying besides the front door
D) The package was lying by the front door.
☐ A ☐ B ☐ C ☐ D
- 129) A) At September, when term began, Chips returned back and took up residence at Mrs. Wickett's.
B) In September, when term began, Chips returned and took up residence at Mrs. Wickett's.
C) On September, when term began, Chips returned and took up residence in Mrs. Wickett's.
D) In September, when term began, Chips returned and took up residence on Mrs. Wickett's.
☐ A ☐ B ☐ C ☐ D
- 130) A) Jess didn't agree about his father's idea of going across the deep valley below them because Jess had just finished to walk a half mile uphill as two slips on the road restricted him from driving his car.
B) Jess didn't agree to his father's idea of going through the deep valley below them because Jess had just finished walking a half mile uphill as two slips in the road restricted him from driving his car.
C) Jess didn't agree with his father's idea of going across the deep valley under them because

Jess had just finished walking a half mile uphill as two slips in the road restricted him from driving his car.

- D) Jess didn't agree with his father's idea of going across the deep valley below them because Jess had just finished walking a half mile uphill as two slips in the road restricted him from driving his car.

☐ A ☐ B ☐ C ☐ D

- 131) A) After the latest failure, she was sure that she lacked for the tenacity to go on.
B) After the latest failure, she was sure that she lacked in the tenacity to go on.
C) After the latest failure, she was sure that she lacked the tenacity to go on.
D) After the latest failure, she was sure that she lacked with the tenacity to go on.

☐ A ☐ B ☐ C ☐ D

- 132) A) What often gets overlooked is the fact that conventional plastic is made from fossil fuels and is a product of the oil and gas industry.
B) What often gets overlooked is the fact that conventional plastic is made of fossil fuels and is a product of the oil and gas industry.
C) What often gets overlooked is the fact that conventional plastic is made by fossil fuels and are a product of the oil and gas industry.
D) What often gets overlooked is the fact that conventional plastic is made from fossil fuels and is a product of the oil and gas industry?

☐ A ☐ B ☐ C ☐ D

- 133) A) He stroked it and it leapt up onto the bench.
B) He stroked it and it leapt up to the bench.
C) He stroked it and it leapt upto onto the bench.
D) He stroked it and it leapt upon onto the bench.

☐ A ☐ B ☐ C ☐ D

- 134) A) The mother was endlessly comparing her friends' children for her own, something that drove her whole family crazy.
B) The mother was endlessly comparing her friends' children to her own, something that drove hers whole family crazy.
C) The mother was endlessly comparing her friends' children with her own, something that drove her whole family crazy.
D) The mother was endlessly comparing her friends' children against her own, something that drove her whole family crazy.

☐ A ☐ B ☐ C ☐ D

- 135) A) With three older siblings already having excelled as tennis stars at the school, Hania strived to be different from her siblings and chose soccer instead.
B) With three older siblings already having excelled as tennis stars at the school, Hania strived to be different to her siblings and chose soccer instead.
C) With three older siblings already having excelled as tennis stars at the school, Hania strived to be different than her siblings, and chose soccer instead.
D) With three older siblings already having excelled as tennis stars at the school, Hania strived to be different after her siblings, and chose soccer instead.

☐ A ☐ B ☐ C ☐ D

PREVIOUS

FINISH TEST